

EXPRESS MAIL NO.: EL750740729US

Docket No. 00-063-DSK

**CLAIMS:**

What is claimed is:

- 1 1. A method for recovery of compromised instances of  
2 virtual mapping systems, comprising the steps of:  
3 identifying a plurality of physical data elements  
4 for which mapping has been compromised;  
5 determining whether anchor points exist for the  
6 plurality of physical data elements;  
7 processing anchor points to find data elements in  
8 managed order if anchor points exist; and  
9 launching processing for each element found.
- 1 2. The method of claim 1, wherein the managed order  
2 comprises data elements with sequential addresses.
- 1 3. The method of claim 1, wherein the managed order  
2 comprises data elements that are sorted by address.
- 1 4. The method of claim 1, wherein the managed order  
2 comprises data elements that are sorted by query  
3 frequency.
- 1 5. The method of claim 1, further comprising:  
2 finding data elements in physical space if anchor  
3 points do not exist.

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1     6.     The method of claim 5, wherein the step of finding  
2     data elements in physical space comprises at least one of  
3     a sequential scan, random entry, and a binary search.

1 7. An apparatus for recovery of compromised instances  
2 of virtual mapping systems, comprising:

3           identification means for identifying a plurality of  
4   physical data elements for which mapping has been  
5   compromised;

6       determination means for determining whether anchor  
7 points exist for the plurality of physical data elements;

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8      first processing means for processing anchor points
9      to find data elements in managed order if anchor points
10     exist; and

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11      second processing means for processing each element
12  found.

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1 8. The apparatus of claim 7, wherein the managed order  
2 comprises data elements with sequential addresses.

1 9. The apparatus of claim 7, wherein the managed order  
2 comprises data elements that are sorted by address.

1 10. The apparatus of claim 7, wherein the managed order  
2 comprises data elements that are sorted by query  
3 frequency.

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- 1 11. The apparatus of claim 7, further comprising:  
2 means for finding data elements in physical space if  
3 anchor points do not exist.
- 1 12. The apparatus of claim 11, wherein the means for  
2 finding data elements in physical space comprises at  
3 least one of a sequential scan, random entry, and a  
4 binary search.

**SECRET**